INSTRUCTION MANUAL
DODGE® GRIP-TIGHT ADAPTER MOUNT BALL BEARINGS

⚠ WARNING

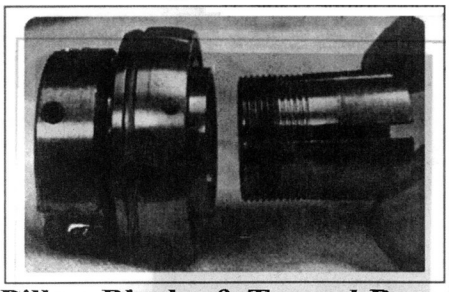
To ensure that drive is not unexpectedly started, turn off, lock out, and tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

Shaft & Mounting Surface Inspection

Shaft should be smooth, straight, & within commercial tolerances (Table 1). Remove burrs & align mounting surfaces within 2 degrees.

Assemble Adapter & Bearing

1) If the locknut is loose from the bearing,
FIRST place locknut into bearing inner ring groove,
THEN insert adapter into bearing bore until it rests against the locknut.
Rotate locknut clockwise to engage adapter sleeve.



Pillow Blocks & Tapped Base Housings

NOTE: For Tapped Base (TB) housings drill mounting holes with 1/16" minimum bolt clearance to assist with proper installation.

2) During installation it is best practice is to remove all of the weight from the bearing via slings or jacks. However, if it is difficult to remove all weight then insure the dead weight on the bearing during installation does not exceed the values listed in Table 2.

Table 2: Maximum Dead Load On Bearing During Installation

Series	Maximum Dead Load Per Bearing (lbs)
203-206	60
207-210	65
211-214	70
215-218	75

3) Slide the unit into position onto the shaft. If the unit will not slip onto the shaft, turn locknut counter-clockwise to expand adapter sleeve.

4) Wearing gloves, rotate locknut clockwise, by hand, as tight as possible until adapter sleeve grips and does not spin on the shaft or move axially. If needed, tap on locknut outer diameter while turning locknut to assist with this step. Scribe the line on the locknut above the adapter sleeve slot.

5) Lock bearing to shaft by rotating locknut, with a spanner wrench or brass bar & hammer, clockwise by amount shown in Table 3. NOTE: The use of air chisels is not recommended.

6) Center housing & mounting bolts over mounting holes & tighten bolts to proper torque (Table 4). Tighten locknut setscrew until 3/32" Allen key bends (25 in-lbs).

7) Repeat above steps for mounting 2nd housing. Do not tighten mounting bolts on 2nd housing until second bearing has been completely locked to the shaft. Bolts must fit freely between housing & mounting surface. If the mounting bolts do not fit freely, loosen mounting bolts on both housings & center both units. If the bolts still will not fit freely, remove one unit from the shaft, reposition housing, & reinstall.

Table 1 - Shaft Tolerances

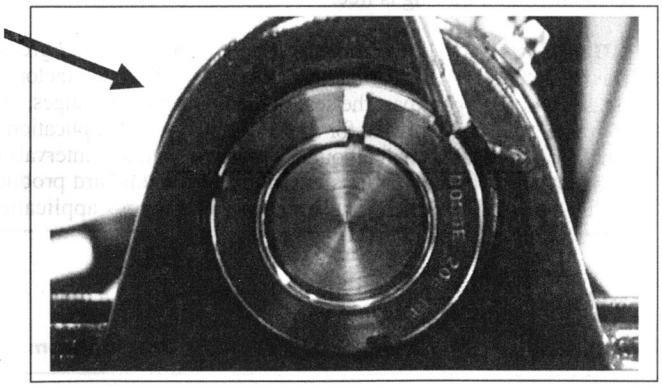
Shaft Size (in)	Commercial Shaft Tolerances (in)
Up to 1 1/2"	+0.000" / - 0.002"
1 5/8" - 2 1/2"	+0.000" / - 0.003"
2 11/16" - 3 7/16"	+0.000" / - 0.004"

Table 3 - Locknut Rotation From Handtight

Series	Shaft Size GT (Normal Duty)	Shaft Size GTM (Medium Duty)	Locknut Rotation
203 - 204	1/2" - 3/4" 17 - 20 mm	--- ---	1/2 Turn
205 - 210	7/8" - 1 3/4" 25 - 45 mm	3/4" - 1 1/2" 20 - 40 mm	2/3 Turn
211 - 218	1 15/16" - 2 15/16" 50 - 75 mm	1 11/16" - 3 1/2" 45 - 85 mm	1 Turn

Table 4 - Mounting Bolt Torque (in-lbs)

Metal Housings		Non-Metallic Polymer Housing			
All Housing Types		Pillow Block, 2 & 4 Bolt Flange, Flange Bracket		Tapped Base	
Bolt Size (in)	Dry Torque (in lbs)	Bolt Size (in)	Dry Torque (18-8 Stainless) (in lbs)	Bolt Size (in)	Dry Torque (18-8 Stainless) (in lbs)
3/8	240	3/8	225	3/8	175
7/16	384	7/16	350	7/16	350
1/2	600	1/2	500	1/2	400
5/8	1200	9/16	650		
3/4	2100	5/8	1000		
7/8	2040				



⚠ WARNING

Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that the correct procedure be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance, and operating procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to ensure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted, and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and potential hazards involved. When risk to persons or property may be involved, a holding device or shear bars must be an integral part of the driven equipment.

All Flange Housings

WARNING: Special attention to the installation procedure for flange bearings is necessary to maintain the proper internal clearance & achieve maximum life. The installation of the first flange differs from the installation of the second flange.

(See step 1 **Assemble Adapter & Bearing** page 1)

2) During installation it is best practice is to remove all of the weight from the bearing via slings or jacks. However, if it is difficult to remove all weight then insure the dead weight on the bearing during installation does not exceed the values listed in Table 2.

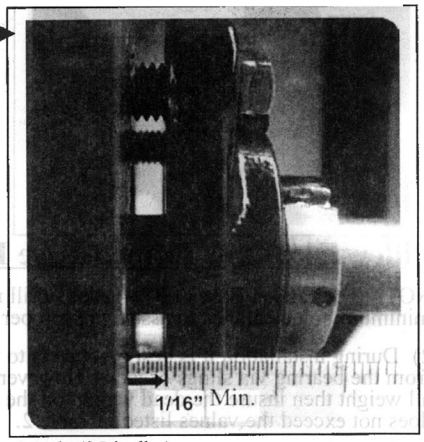
3) Slide the FIRST unit into position onto the shaft. If the bearing will not slip onto the shaft or more axially, turn locknut counter clockwise to expand adapter sleeve.

4) (Using gloves) rotate locknut clockwise by hand until it is tight & adapter sleeve grips & does not spin on the shaft. This is the starting point. Scribe a line on the locknut above the adapter sleeve slot.
(If needed, tap on locknut outer diameter while turning locknut to assist with this step.)

5) Lock bearing to shaft by rotating locknut, with a spanner wrench or brass bar & hammer, clockwise by amount shown in Table 2. NOTE: The use of air chisels is not recommended.

6) Tighten locknut setscrew until 3/32" Allen key bends (or 25 in-lbs). Tighten housing bolts to proper torque (Table 3).

7) Slide the **SECOND** flange onto the shaft and hand tighten as in step 4 but leave 1/16" minimum gap between the flange housing & the mounting surface. See picture to the right.



8) It is important to note that the 1/16" minimum gap between the flange housing and the mounting surface must be maintained while getting the bearing hand tight to the shaft. Wearing gloves, rotate the locknut clockwise, by hand, until adapter sleeve grips and does not spin or move axially on the shaft. If needed, tap on the locknut outer diameter while turning the locknut to assist with this step. At this point you should have difficulty in rotating the locknut by hand and you should not be able to move the bearing axially along the shaft by hand. If the bearing can be moved axially along the shaft by hand then continue rotating the nut gradually until it grips the shaft. Scribe a line on the locknut above the adapter sleeve slot.

9) Insert housing bolts & pull the housing flush with mounting surface by alternately tightening the bolts to the proper torque (Table 4).

10) Lock bearing to shaft by rotating locknut, with a spanner wrench or drift pin & hammer, clockwise by amount shown in Table 3. Tighten locknut setscrew until 3/32" Allen key bends (25 in-lbs).

11) Rotate the shaft by hand, no binding or excessive drag should be felt. If excessive drag is felt, loosen the second bearing & reinstall starting at step 8.

Dismounting All Units

1) Remove all weight from the bearing via slings or jacks & secure the shaft from rotation.

2) **LOOSEN THE HOUSING MOUNTING BOLTS & COMPLETELY REMOVE SETSCREW IN THE LOCKNUT.**

3) Rotate locknut counter clockwise with spanner wrench or drift pin & hammer until bearing is free.

Table 5 - Suggested Lubrication Intervals in Weeks

Hours Run Per Day	RPM 1 to 250 RPM	251 to 500 RPM	501 to 750 RPM	751 to 1000 RPM	1001 to 1500 RPM	1501 to 2000 RPM	2001 to 2500 RPM	2500 to Max RPM
8	12	12	10	7	5	4	3	3
16	12	7	5	4	2	2	1	1
24	10	5	3	2	1	1	1	1

* LUBRICATION: (Use compatible Mobil SHC 220 PM Grease) The Dodge Grip-Tight Bearing has been greased from the factory and is shaft ready. When re-lubricating slowly add grease until fresh grease is seen purging past the seal. In the higher speed ranges excess grease may cause temporary bearing overheating. The amount of grease a bearing will take for a specific high-speed application is best determined by experience. When establishing a re-lubrication schedule, note that a small amount of grease at frequent intervals is preferred to a large amount of grease at infrequent intervals. Lubrication recommendation: Grease every 10 hours. For modified products, high temperature applications, and other anomalous applications contact product engineering at 864-284-5700.

* **SUPERSEDES ALL OTHER LUBRICATION INSTRUCTIONS - 8/13/2010**

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Baldor Electric Company Headquarters
P.O. Box 2400, Fort Smith, AR 72902-2400 U.S.A., Ph: (1) 479.648.5792, Fax (1) 479.648.5792, International Fax (1) 479.648.5895

Baldor - DODGE/Reliance
6040 Ponders Court, Greenville, SC 29615-4617 U.S.A., Ph: (1) 864.297.4800, FAX: (1) 864.281.2433

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